

AMENDMENTS TO THE CLAIMS

1. (Previously presented): A method for handling requests for web services, the method comprising the computer-implemented steps of:
 receiving at a web services broker, from a particular instance of a client application, a request for information, wherein said request includes an identification of a particular web service from which said particular instance wants said requested information, the request having first input data, the first input data being in a form that cannot be used by said particular web service to service requests for said information;
 wherein the particular web service serves as the source of said requested information, and is separate from the web services broker;
 wherein the particular instance of said client application is separate from the web services broker and does not have logic for directly interacting with said particular web service;
 in response to receiving said request, the web services broker
 accessing, based on said identification of said particular web service,
 transformation information that specifies,
 how to transform said first input data associated with said request to
 second input data that said particular web service can use to
 service requests for said requested information, and
 how to invoke said particular web service in a manner required by said
 particular web service, to obtain said requested information from
 said particular web service;
 transforming said first input data to said second input data; and
 invoking, in said manner required by said particular web service, said particular
 web service to obtain said requested information from said particular web
 service.

2. (Previously presented): The method of Claim 1, further comprising the steps of:
 receiving, from said particular web service, said requested information; and
 transforming, based on said transformation information, said requested information to
 data that said client application can use.

3. (Canceled)
4. (Canceled)
5. (Previously presented) The method of Claim 1, wherein said transformation information includes a mapping of first input data from a first particular client application to second input data that a first web service can use, and a mapping of first input data from a second particular client application to said second input data that said first web service can use, and wherein said first input data from said first particular client application has a different form than said first input data from said second particular client application.
6. (Previously presented): The method of Claim 1, wherein said transformation information includes a mapping of first input data from a first client application to second input data that a first web service can use and to second input data that a second web service can use, and wherein said first web service is different than said second web service.
7. (Original): The method of Claim 1, further comprising the computer-implemented steps of:
based on said transformation information, determining whether to use RPC style of communication or messaging style of communication to invoke said particular web service.
8. (Original): The method of Claim 1, further comprising the computer-implemented steps of:
based on said transformation information, determining whether to use SOAP encoding to encode a communication for invoking said particular web service.
9. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 1.
10. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 2.
11. (Canceled)

12. (Canceled)
13. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 5.
14. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 6.
15. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 7.
16. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 8.
17. (Previously presented): A method for handling requests for web services, the method comprising the computer-implemented steps of:
 - receiving at a web services broker, from a particular instance of a client application, a request for information, wherein said request includes an identification of a particular instance of said client application, the request having first input data, the first input data being in a form that cannot be used by a particular web service to service requests for said information;
 - wherein the particular web service serves as the source of said requested information and is separate from the web services broker;
 - wherein the client application is separate from the web services broker and does not have logic for directly interacting with said particular web service;
 - in response to receiving said request, based on said identification of said particular instance of said client application, the web services broker accessing transformation information;
 - wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said

particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information;

wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information; and

based on said transformation information, the web services broker transforming said first input data to said second input data.

18. (Previously presented): The method of Claim 17, wherein said identification of a particular instance of said client application includes identification of a user of said client application.
19. (Previously presented): The method of Claim 17, further comprising the computer-implemented step of:
passing said second input data as input to said particular web service to service said request.
20. (Previously presented): The method of Claim 19,
wherein said transformation information specifies a mapping between said first input data output from said client application and data that said particular web service can use as input to determine said requested information; and
wherein said step of passing includes passing said second input data, according to said transformation information, as input to said particular web service to determine said requested information.
21. (Previously presented): The method of Claim 20,
wherein said transformation information specifies a first manner in which said particular web service can be invoked to service requests for said requested information; and
wherein said step of passing includes passing said second input data in said first manner, to invoke said particular web service to determine said requested information.
22. (Previously presented): The method of Claim 21,

- wherein said transformation information specifies a second manner in which said second input data is characterized so that said particular web service can be invoked to service requests for said requested information; and
- wherein said step of passing includes passing, according to said first manner, said second input data that is characterized according to said second manner, to invoke said particular web service to determine said requested information.
23. (Previously presented): The method of Claim 22, wherein said second manner includes characterizing said second input data according to Simple Object Access Protocol.
 24. (Previously presented): The method of Claim 19, wherein said transformation information specifies a first manner in which said particular web service can be invoked to service requests for said requested information and a second manner in which said second input data is characterized in an invocation of said particular web service; and wherein said step of passing includes passing, according to said first manner, said second input data that is characterized according to said second manner, to invoke said particular web service to determine said requested information.
 25. (Original): The method of Claim 17, wherein said particular web service has characteristics that are described in Web Service Description Language.
 26. (Original): The method of Claim 25, wherein said particular web service has characteristics that are published in a Universal Description, Discovery, and Integration registry.
 27. (Previously presented): The method of Claim 17, further comprising the steps of: receiving, from said particular web service, said requested information; and transforming, based on said transformation information, said requested information to data that said client application can use.
 28. (Previously presented): The method of Claim 17, wherein said transformation information specifies how to transform a plurality of first input data each from a respective client application of a plurality of client applications, to a plurality of second input data each for a respective web service of a plurality of web services.

29. (Canceled)
30. (Previously presented): The method of Claim 17, wherein said transformation information includes a mapping of first input data from a first particular client application to second input data that a first web service can use, and a mapping of first input data from a second particular client application to said second input data that said first web service can use, and wherein said first input data from said first particular client application has a different form than said first input data from said second particular client application.
31. (Previously presented): The method of Claim 17, wherein said transformation information includes a mapping of first input data from a first client application to second input data that a first web service can use and to second input data that a second web service can use, and wherein said first web service is different than said second web service.
32. (Previously presented): The method of Claim 31, wherein said first web service and said second web service can determine the same requested information, and wherein said second input data that said first web service can use is different from said second input data that said second web service can use.
33. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 17.
34. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 18.
35. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 19.

36. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 20.
37. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 21.
38. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 22.
39. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 23.
40. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 24.
41. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 25.
42. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 26.
43. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 27.
44. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 28.

45. (Canceled)
46. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 30.
47. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 31.
48. (Previously presented): A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 32.
49. (Previously presented): A system for handling requests for web services, the system comprising:
means for receiving at a web services broker, from a particular instance of a client application, a request for information from a particular web service, wherein said request includes an identification of a particular web service from which said particular instance wants said requested information, the request having first input data, the first input data being in a form that cannot be used by said particular web service to service requests for said information;
wherein the particular web service serves as the source of said requested information and is separate from the web services broker;
wherein the particular instance of the client application is separate from the web services broker and does not have logic for directly interacting with said particular web service;
means for the web services broker accessing, in response to receiving said request, based on said identification of said particular web service, transformation information that specifies
how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information, and

how to invoke said particular web service in a manner required by said particular web service, to obtain said requested information from said particular web service;

means for the web services broker transforming, in response to receiving said request, based on said transformation information, said first input data to said second input data; and

means for the web services broker invoking, in response to receiving said request, based on said transformation information, said particular web service in said manner required by said particular web service to obtain said requested information.

50. (Currently amended): A[[An]] system for handling requests for web services, the system comprising:

means for receiving at a web services broker, from a particular instance of said client application, a request for information, wherein said request includes an identification of a particular instance of said client application, the request having first input data, the first input data being in a form that cannot be used by a particular web service to service requests for said information;

wherein the particular web service serves as the source of said requested information and is separate from the web services broker;

wherein the client application is separate from the web services broker and does not have logic for directly interacting with said particular web service;

means for the web services broker accessing transformation information in response to receiving said request and based on said identification of said particular instance of said client application;

wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information;

wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information; and

- means for the web services broker transforming said first input data to said second input data based on said transformation information.
51. (New) The method of Claim 1,
wherein the first input data includes a value that corresponds to a parameter required by the particular web service;
wherein the step of transforming includes changing the content of the value to create transformed content;
wherein said requested information is obtained from said particular web service by providing the transformed content to the particular web service as a value for said parameter.
52. (New) The method of Claim 1,
wherein the request for information does not include any value for a parameter required by said particular web service;
wherein the step of transforming includes supplementing the first input data with a value for said parameter.
53. (New) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 51.
54. (New) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 52.
55. (New) The method of Claim 1, wherein said transformation information specifies how to transform a plurality of first data each from a respective source of a plurality of sources, to a plurality of second data each for a respective web service of a plurality of web services.

56. (New) A computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 55.